

IN THE CLAIMS:

Claims 1-24 (Canceled).

Claim 25 (Currently Amended): An intracellular-reaction measuring apparatus for measuring intracellular reactions after introduction of chemical substances by the use of a specimen in which a plurality of cells which stand adherent to one another, are contained, the apparatus comprising:

photo-detecting means which detects the intensity of first light emitted from said cells in accordance with the presence of a stated protein and the intensity of second light emitted from said cells notwithstanding that a stated protein is present or not therein;

a controller that selectively sets into a measuring optical path a first filter member for making the photo-detecting means detect said first light and a second filter member for making the photo-detecting means detect said second light;

a first extracting member that extracts expressed cells emitting said first light as an image on the basis of a detection signal of said first light detected by said photo-detecting means when the controller sets the first filter into the measuring optical path;

a second extracting member that extracts all cells emitting said second light as an image on the basis of a detection signal of said second light detected by said photo-detecting means when the controller sets the second filter into the measuring optical path;

a specifying member that superposes the image of the expressed cells extracted by the first extracting means and the image of all cells extracted by the second extracting means and specifies a cell region containing in which said expressed cells extracted by the first extracting member are contained with a higher proportion than a stated standard, among cell regions containing said all cells inclusive of cells having no stated protein extracted by the second extracting member, ~~which includes cells not having the stated protein;~~ and

an analyzing member which analyzes said intracellular reactions on the basis of the detected signal, which is detected by said photo-detecting means, of said second light emitted from said ~~cell region specified by the specifying member;~~ cells in which said stated protein is present and the second light emitted, in accordance with intracellular reactions induced by the stated protein, from said cells in which said stated protein is not present

~~wherein said analyzing member analyzes said intracellular reactions, using the second light emitted from said cells in which said stated protein is present and the second light emitted in accordance with intracellular reactions induced by the stated protein from said cells in which said stated protein is not present.~~

Claim 26 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 25, further comprising:

a chemical-substance introduction means for introducing into said cells chemical substances which target said protein.

Claim 27 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 25, wherein the second extracting member extracts said all cells on the basis of the detected signal of said second light detected by said photo-detecting means.

Claim 28 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 25, wherein the second extracting member extracts said all cells from a picture image of said sample captured by a phase-contrast microscope.

Claim 29 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 25, wherein said photo-detecting means is a cooled imaging device, said cooled imaging device captures a fluorescent image by detecting fluorescence from said cells, and said first and second extracting members extract cells on the basis of brightness information of said fluorescent image.

Claim 30 (Currently Amended): An intracellular-reaction measuring apparatus for measuring intracellular reactions after introduction of chemical substances by the use of a specimen in which a plurality of cells are contained, as a plurality of cell colonies in a non-contact state, the apparatus comprising:

photo-detecting means which detects the intensity of first light emitted from said cells in accordance with the presence of a stated protein and the intensity of second light emitted from said cells notwithstanding that a stated protein is present or not therein;

a controller that selectively sets into a measuring optical path a first filter member for making the photo-detecting means detect said first light and a second filter member for making the photo-detecting means detect said second light;

a first extracting member that extracts expressed cells emitting said first light as an image on the basis of a detection signal of said first light detected by said photo-detecting means when the controller sets the first filter into the measuring optical path;

a second extracting member that extracts all cell colonies emitting said second light as an image on the basis of a detection signal of said second light detected by said photo-detecting means when the controller sets the second filter into the measuring optical path;

a specifying member that superposes the image of the expressed cells extracted by the first extracting means and the image of all cells extracted by the second extracting means and specifies a cell colony in which ~~containing~~ said expressed cells extracted by the first extracting member are contained with a higher proportion than a stated standard, among said all cell colonies inclusive of cells not having the state protein extracted by the second extracting member, which includes cells not having the stated protein; and

an analyzing member which analyzes said intracellular reactions after introduction of chemical substances on the basis of the detected signal, which is detected by said photo-detecting means, of said second light emitted, in accordance with intracellular reactions induced by the stated protein, from said cell colonies specified by the specifying member and the second light emitted from said cells in which said stated protein is not present, in accordance with intracellular reactions induced by the stated protein [[:]]

~~wherein said analyzing member analyzes said intracellular reactions, using the second light emitted from said cells in which said stated protein is present and the second light emitted in accordance with intracellular reactions induced by the stated protein from said cells in which said stated protein is not present.~~

Claim 31 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 30, further comprises a chemical-substance introduction device for introducing into said cells chemical substances which target said protein.

Claim 32 (Canceled).

Claim 33 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 30, wherein said second extracting member extracts said all cell colonies on the basis of the detection signal of the second light detected by said photo-detecting means.

Claim 34 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 30, wherein the second extracting member extracts said all cell colonies from a picture image of said sample captured by a phase-contrast microscope.

Claims 35-39 (Canceled).

Claim 40 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 30, wherein said first extracting member counts the number of said expressed cells, said second extracting member counts the number of cells of each cell colony, and said specifying member specifies said cell colony which is extracted by the second extracting member and contains said expressed cells extracted by the first extracting member, and then said specifying member selects said cell colony containing said expressed cells extracted by the first extracting member with a larger number than said stated standard with respect to the number of cells of said cell colony counted by the second extracting member.

Claim 41 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 30, wherein said photo-detecting means is a cooled imaging device, said cooled imaging device captures a fluorescent image by detecting fluorescence from said cells, and said first and second extracting members extract cells on the basis of brightness information of said fluorescent image.